

## REMARKS

In accordance with the suggestions made in the Office Action, claims 2 and 3 were amended to the to recite proper Markush terminology, and claims 2, 6, 10, and 12 were amended to provide proper antecedent basis. In addition, independent claim 8 was cancelled, and dependent claim 9 was amended and rewritten to incorporate the limitation of claim 8. New claim 38 is a combination of claims 10 and 12. New claim 39 is claim 10 with a pressure limitation. As discussed above the pressure limitation is supported in the specification at pages 8, line 21. Further, the claimed pressure is also addressed in the Office Action at paragraph 29 under the heading "allowable subject matter."

### **102 Rejections**

Claims 8 and 9 were rejected as being anticipated by *Ion beam texturing* by Hundson. Claim 9 was amended to exclude copper and incorporate claim 8. Amended claim 9 now recites a method for the synthesis of large area uniform cone arrays made of a first material by ion-beam sputtering, wherein the first material is used as a substrate, and a second material is used as a catalyst, wherein the first material is selected from a group consisting of germanium or graphite, wherein the second material is a metal.

Hundson fails to disclose the above claimed method. Hudson does not disclose the use of graphite or germanium. Hudson's disclosure is limited to the use of molybdenum and copper in surface texturing. Since Hudson does not disclose the use of germanium or graphite, it does not anticipate amended claim 9.

Claim 10 was rejected as being anticipated by Fujimoto et al., *Geometry and structure of sputter-induced cones on nickel-seeded silicon*. This rejection is traversed.

Independent claim 10 recites, among other things, an apparatus for ion-beam sputtering of large area uniform silicon cones comprising a means for adjusting the angles between an ion-beam and the substrate surface normal, and a means for arranging a metal catalyst around the substrate.

Fujimoto fails to disclose a means for adjusting the angle between the ion beam and the substrate surface as claimed in the present invention. The angle in Fujimoto is fixed at 55 degrees. In addition, Fujimoto fails to disclose a means for arranging a metal catalyst around the substrate as claimed in the present invention. The catalyst in Fujimoto is the Ni seed wire which is held above and perpendicular to the substrate. In contrast, the catalyst in the claimed invention

is provided around the substrate. The claimed arrangement overcomes problems inherent to arrangements like the one disclosed in Fujimoto. The claimed arrangement of the metal catalyst around the substrate allows for the sputtering of larger areas and the creation of cones with greater consistency in respect to density and size. Since Fujimoto fails to disclose a means for adjusting the angle between the ion beam that the surface and also fails to disclose a means for arranging a metal catalyst around the substrate, Fujimoto does not anticipate claim 10.

### 103 Rejections

Claim 11 was rejected as being obvious over Fujimoto in view of Xie et al. (U.S. Patent No. 6,294,740). This rejection is traversed. Claim 11 incorporates the limitations of claim 10. Therefore, since claim 10 is not obvious over Fujimoto in view of Xie, neither is claim 11.

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. Applicant thanks the Examiner for allowing claims 1, 3-5, and 7. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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